

Bioactive Rare Acetogenins from the Red Alga *Laurencia obtusa*

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Abstract : Halogenated cyclic enynes and terpenoids are commonly identified among secondary metabolites of the genus *Laurencia*. Laurencian acetogenins are entirely C15 non-terpenoid haloethers with different carbocyclic nuclei; a specimen of the Red Sea red alga *L. obtusa* was investigated for its acetogenin content. The dichloromethane extract of the air-dried red algal material was fractionated on aluminum oxide column preparative thin-layer chromatography. Three new rare C12 acetogenin derivatives (1-3) were isolated from the organic extract obtained from *Laurencia obtusa*, collected from the territorial Red Sea water of Saudi Arabia. The structures of the isolated metabolites were established by means of spectroscopical data analyses. Examining the isolated compounds in activated human peripheral blood mononuclear cells (PBMC) revealed potent Anti-inflammatory activity as evidenced by inhibition of NF κ B and release of other inflammatory mediators like TNF- α , IL-1 β and IL-6.

Keywords : Red Sea, red algae, fatty acids, spectroscopy, anti-inflammatory

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